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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,063	08/20/2004	Shinsuke Fujiwara	039.0046	5062

29453 7590 06/22/2007  
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EXAMINER
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GUHARAY, KARABI

ART UNIT	PAPER NUMBER
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2879

MAIL DATE	DELIVERY MODE
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06/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/711,063	<b>Applicant(s)</b> FUJIWARA, SHINSUKE	
	<b>Examiner</b> Karabi Guharay	<b>Art Unit</b> 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.  
4a) Of the above claim(s) 15-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/04; 10/06</u> . | 6) <input type="checkbox"/> Other: ____.  |

***Election/Restrictions***

Applicant's election without traverse of claims 1-14 in the reply filed on 4/27/07 is acknowledged.

Claims 15-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group II, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4/27/07.

***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Drawings***

Figures 11-13 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction

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of the following is required: Claim 7 which is dependent from claim 1, recites a second LED along with a first LED, which is not taught or illustrated in the disclosure.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-12 & 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Menkara et al. (US 2005/0023962).

Regarding claims 1-3 & 5, Menkara et al. disclose a white light emitting device comprising a first LED (Fig 2) and at least one first phosphor  $\text{ZnS}_x \text{Se}_{1-x}$  ( $0 < x < 1$ ) containing at least one activator among Cu, Ag, and Au and sending forth light when stimulated by rays irradiated from the first LED (Paragraphs 26, 43-44 & 52).

Regarding claim 4, Menkara et al. disclose that the first phosphor  $\text{ZnS}_x \text{Se}_{1-x}$  ( $0 < x < 1$ ) is in clumplike form or powdered form (paragraph 53).

Regarding claim 6, Menkara et al. disclose a white light emitting device wherein the first phosphor  $\text{ZnS}_x \text{Se}_{1-x}$  ( $0.4 \leq x \leq 0.5$ ) contains the activator Ag and sends forth light stimulated by rays in a range of wavelengths 410nm to 490 nm irradiated the first LED (paragraph 55).

Regarding claims 8-10, Menkara et al. disclose first and second phosphor with the LED which emit light of wavelength longer than the wavelength of the light emitted by LED and provide white light emission (see paragraph 43) and also teaches a phosphor  $\text{ZnS}_x \text{Se}_{1-x}$  ( $0 < x < 1$ ) and further teaches different color emission from this phosphor by varying the value of X (see paragraphs 54-56).

Regarding claim 11, Menkara et al. disclose (see Fig 2) that the clumplike phosphor is mounted on, so as to mate surfaces with the first LED (paragraph 42).

Regarding claim 12, Menkara discloses (Fig 2) the Lead frame mounted LEDs though does not specifically mentioned heat dissipation member, it is well known that the lead frames act as heat dissipation member, and since phosphor is mounted on the LED chip it mates with the lead frame member.

Regarding claim 14, examiner notes that the claim limitation of "the first phosphor is heat treated in an atmosphere containing Zn vapor" is drawn to a process of manufacturing, which is incidental to the claimed apparatus.

Even though product by process claims are limited by and defined by the process, determination of patentability is based on the product. It is well established that a claimed apparatus cannot be distinguished over the prior art structure by a process limitation. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject process limitation is not afforded patentable weight (see MPEP 2113).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Menkara et al. as applied to claim 1 above, and further in view of Fujiwara (JP2003-347588).

Regarding claim 13, Menkara discloses all the limitations of claims 12-13, including a blue emitting LED, except for InGaN being used as LED.

However, in the same field of white light emitting device, Fujiwara teaches use of InGaN for blue emitting LED (see Fig 4, item 27) where the zinc sulfo-selenide fluorescent material (28) is disposed on the LED.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate InGaN for blue emitting LED in the device of Menkara since it is a well known material used in the art as blue emitting LED as taught by Fujiwara.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Menkara et al. as applied to claim 1 above, and further in view of Shimizu et al. (US 6817735).

Regarding claim 7, Menkara discloses all the limitations of claim 7 except for having a second LED for irradiating red light.

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However, Shimizu et al. in the same field of white light emission uses a blue emitting LED with a phosphor and a second LED emitting red (see lines 44-50 of column 1 and lines 46-51 of column 2) and further teaches that such configuration of light emission provides high efficiency and high color rendering performance (see Abstract).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use plurality of LEDs as taught by Shimizu et al. in the device of Menkara since this will provide high efficiency and high color rendering performances.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is 571-272-2452. The examiner can normally be reached on Monday-Friday 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*K. Guharay*

Karabi Guharay  
Primary Examiner  
Art Unit 2879

*6/18/07*